

REMARKS

Entry of this amendment and reconsideration of this application are respectfully requested.

Claims 22-48 were rejected under 35 U.S.C. §103(a) for allegedly being unpatentable over Shekhter. Applicants respectfully traverse.

Shekhter discloses the state of the art as being directed to the direct reduction of tantalum or niob oxides with earth alkali metals. He discloses that the main disadvantage of this approach is that:

"To date, none of these approaches were commercialized significantly because they did not produce high quality powders. Apparently, the reason these approaches failed in the past was because the reductions were carried out by blending the reducing agents with the metal oxide. The reaction took place in contact with the molten reducing agent and under conditions of inability to control the temperature of highly exothermic reactions. Therefore, one is unable to control morphology of the products and residual reducing metal content." (see Shekhter B1; col. 3, line 4 to 14).

Shekhter especially notes that:

"... when a much greater quantity of tantalum oxide is reduced a large quantity of magnesium oxide is generated. The resulting mixture of magnesium. tantalum oxide and magnesium oxide can under conditions of poorly controlled temperature. form tantalummagnesiumoxygen complexes that are difficult to separate from the tantalum metal." (see Shekhter col. 3, line 38 to 44).

The principal object of their invention was to provide:

"...a new approach to production of high performance. capacitor grade tantalum and niobium powders that provides a means of eliminating one or more, preferably all, the problems of traditional double salt reduction and follow on processing." (see Shekhter col. 3, lines 46 to 49).

Shekhter discloses that he and his co inventors:

" have discovered that the prior art problems can be eliminated when metal oxides such as Ta_2O_5 and Nb_2O_5 , and suboxides in massive amounts are reduced with magnesium in gaseous form, substantially or preferably entirely. The oxide source should be substantially or preferably entirely in solid. The oxide is provided in the form a porous solid with high access throughout its mass by the gaseous reducing agent. (see Shekhter col. 3, lines 56 to 65).

Based of the problem cited by Shekhter and his solution for that problem, a man of skill in the art would understand that he could get the pure metals only by using earth alkali metals in

gaseous form through metal oxides "... being in a form that is traversable by gas...". (see Shekhter col. 5, line 2 and claims 24, 26 and 48).

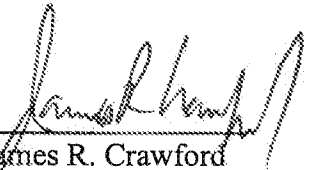
Thus, the rejection can only be based on hindsight, using applicant's specification as a guide.

In view of the foregoing, allowance is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0624, under Order No. NY-DNAG-313-US.

Respectfully submitted

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